

N^o 23,790



A.D. 1909

Date of Application, No. 23,790, 18th Oct., 1909

" " " No. 28,976, 11th Dec., 1909

Complete Specification Left, 15th Apr., 1910

(Section 18 of the Patents and Designs Act, 1907)

Complete Specification Accepted, 18th Aug., 1910

PROVISIONAL SPECIFICATION.

No. 23,790, A.D. 1909.

Improvements in or relating to Steering of Vessels.

I, MYLES GILBERT HARRISON, 57, Station Road, Norton-on-Tees, Durham, Master Mariner, do hereby declare the nature of this invention to be as follows:—

5 This invention concerns improvements in or relating to the steering of vessels, and, more particularly, to an improved indicator for telling the direction given to the ship by the man at the wheel.

According to my invention, an indicator of substantial dimensions is affixed to the, or adjacent to the, centre of the fore end of the rail of the bridge deck, the indicator arm being geared to the spindle of the steering wheel by flexible
10 connections carried by suitable lead blocks around the bridge rails, across the deck, and up to the spindle of the steering wheel, as hereinafter described.

My invention is carried into effect as follows:

A long rigid indicator proper, preferably of wood, some feet in length, symmetrically disposed to right and left of a straight axis, is pivotally mounted
15 in a suitable framework affixed to, or adjacent to, the fore rail of the bridge deck at its centre. The said indicator is free to revolve in a vertical plane within limits determined by the said framework. The pivot is preferably at an elevation coinciding with half the height of the said rail, and the part of the indicator above the pivot extends a considerable distance above the rail. To
20 the end of the shorter arm of the indicator below the said pivot are connected the ends of a flexible cord, or its equivalent, or cords carried, in suitable lead blocks or guide pulleys affixed to the bridge rail, to right and left around the ends of the bridge and across the bridge deck to a position below the end of the spindle of the steering wheel on the side of the pedestal thereof remote from
25 the wheel. The cords are there passed around sheaves and are connected to a drum affixed to the said spindle and which revolves therewith. As the wheel is turned to port or starboard the pull of the cords moves the indicator correspondingly.

The framework of the indicator consists of uprights of wood and transverse
30 brasses affixed thereto to serve as guides to steady the indicator and keep it in the vertical plane; but, in a modification, the said frame might be made entirely of metal and clamped, lashed, or bolted to the bridge rail.

Those portions of the cords traversing the bridge deck are suitably protected by metal casing.

35 Dated this 15th day of October, 1909.

MYLES GILBERT HARRISON.

[Price 8d.]



Best Available Copy

Harrison's Improvements in or relating to Steering of Vessels.

PROVISIONAL SPECIFICATION.

No. 28,976, A.D. 1909.

Improvements in or relating to Steering of Vessels.

I, MYLES GILBERT HARRISON, 57, Station Road, Norton-on-Tees, Durham, Master Mariner, do hereby declare the nature of this invention to be as follows:—

This invention relates to the steering of vessels, and, more particularly, to an improved indicator for telling the direction given to the ship by the man at the wheel. The present application relates to improvements and modifications of the mechanism described in my Provisional Application No. 23,790 of 1909, the two inventions being cognate.

According to this my present invention, my improved indicator is affixed by screws or their equivalent to the stanchion for the ship's awning in the centre of the forepart of the bridge deck rail.

The indicator is worked by wires, or cords, which pass direct from the indicator to the wheel in brass or equivalent tubes countersunk in the deck.

The carriage of the indicator consists of two vertical semicircular or circular brass or equivalent guides, preferably fashioned integral with horizontal diametrical bars the ends of which project beyond the circumference of the guides.

Between the projecting extensions of the bars are pivoted nuts carrying adjustable bifurcated pulley holders. Each holder carries one pulley and one fixed pin.

The guides are connected by bolts, passed through the bars, at their circumference, tubular distance washers being threaded on the said bolts which are secured by nuts.

At the centre of the guides and horizontal bar, a bolt is passed through from the back to form a pivot for the indicator being secured in front either by a nut or, as I prefer, by a washer and split pin. The indicator proper consists of a wooden arm suitably painted or enamelled, preferably in black and white, faced at its lower end with brass plates the lower ends of which project below the guides and carry pulleys.

The cords or wires to work the indicator are first passed around the pulleys at the bottom of the brass plates, and their ends secured to the pins in the upper pulley holders.

They are then passed around the upper pulleys, brought down to the deck level and carried, over or around suitable guide pulleys, to beneath the spindle of the wheel.

On the back of the spindle of the wheel is affixed a winding drum to which the ends of the wires or cords are attached, and which may be grooved to guide the coiling wire. As the wheel is brought round, say eight times, the indicating arm is moved from one extreme position to another. The guides preferably carry letters, S, M, P, to indicate starboard, midship, and port, and may be marked as a protractor to signify angles of inclination.

Dated this 11th day of December, 1909.

MYLES GILBERT HARRISON.

Harrison's Improvements in or relating to Steering of Vessels.

COMPLETE SPECIFICATION.

Improvements in or relating to Steering of Vessels.

I, MYLES GILBERT HARRISON, 57, Station Road, Norton-on-Tees, Durham; Master Mariner, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

- 6 This invention concerns improvements in or relating to steering of vessels, and, more particularly, to an improved indicator for telling the direction given to the ship by the man at the wheel.

The invention consists in affixing such an indicator as is hereinafter described to the stanchion for the ship's awning in the centre of the fore part of the bridge deck rail, and in joining such indicator by flexible connections to the spindle of the wheel so that as the latter is turned to right and left the indicating arm is moved reciprocally.

In the accompanying drawings:—

Figure I. represents a front elevation of my improved indicator;

- 15 Figure II. represents a corresponding view of the back member of the indicator;

Figure III. is a plan of the indicator with a section of the stanchion to which it is affixed.

The same reference numbers relate to like parts throughout the several views.

- 20 According to my invention a long wooden (or equivalent,) arm 1, faced by brass plates 2 carrying revoluble pulleys 3, is pivotally mounted between brass guides 5, 6, of semicircular form bearing the letters S, M, P, to signify star-board midships, port respectively, the front guide 5 being marked if desired as a protractor with angles of inclination.

- 25 Tubular distance washers 7 are used between the two guides the said washers being traversed by the bolts 8 which, with nuts 9, serve to tighten the two guides together. The ends of the bolts may have holes 10 through which may be inserted hooks or cords to lash the ends of the indicator to the bridge deck rail;

- 30 The head 12 of the pivot 11 is countersunk in the stanchion 13 for the ship's awning. The said pivot may be secured by a washer 14 and split pin 15. Other equivalent methods of pivoting the arm 1 might however be used.

The guides 5, 6, have extensions 16 at the ends of which are pivoted distance pieces 21 of square (or equivalent) section.

- 35 Screw threaded shanks 20 of adjustable sheave holders 17 traverse the said distance pieces 21 the adjustment being effected by nuts 22 screwing on the said shanks 20.

The said holders 17 carry pins 18 to which the ends of flexible connections of brass wire or cord are affixed.

- 40 The said connections 4 are then passed around the pulleys 3 and over the sheaves 19 whence they pass, guided by suitable lead pulleys to a spindle on the spindle of the steering wheel and concentric therewith, to which they are secured.

- The said connections 4 may be conducted by suitable lead pulleys around the bridge deck rail and then across the said deck at right angles to the spindle of the wheel: I prefer however to bring the connections straight down to the deck, pass them under vertical pulleys, and conduct them straight along the deck to below the spindle of the wheel in a direction parallel thereto. The connections are led by vertical and horizontal lead pulleys up to a spindle or drum on the spindle of the wheel so fixed as to revolve with the wheel. The

- 50 arrangement is such that when the wheel is revolved a number of times, as

Harrison's Improvements in or relating to Steering of Vessels.

eight, the arm of the indicator is caused by the pull of the connections to move from one extreme to the other.

The indicator may be affixed to the stanchion as follows: Countersunk holes 23, 24, 25, are provided in the back member in such positions that the indicator may be screwed to the stanchion at the centre of the bridge deck rail. 5

The connections spanning the deck are protected by brass tubes or strips countersunk in the deck.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:— 10

1. A long wooden arm, faced by brass plates carrying pulleys, pivotally mounted between semicircular brass guides having extensions carrying adjustable pulleys, and affixed to the stanchion for a ship's awning in the centre of the bridge deck rail in combination with flexible connections having their near ends affixed to the pulley adjusters and their remote ends attached to a drum on the spindle of the steering wheel of a ship substantially as and for the purposes herein set forth with reference to the accompanying drawings. 15

2. The combination of parts comprising the long arm 1, back guide 6, front lettered guide 5, pulleys, adjusters, bolts, nuts, and connections herein described and shown in the accompanying drawings for the purpose of a ship's steering indicator. 20

Dated this 15th day of April, 1910.

MYLES GILBERT HARRISON.

[This Drawing is a reproduction of the Original on a reduced scale.]

